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## U. S. DEPARTMENT OF AGRICULTURE

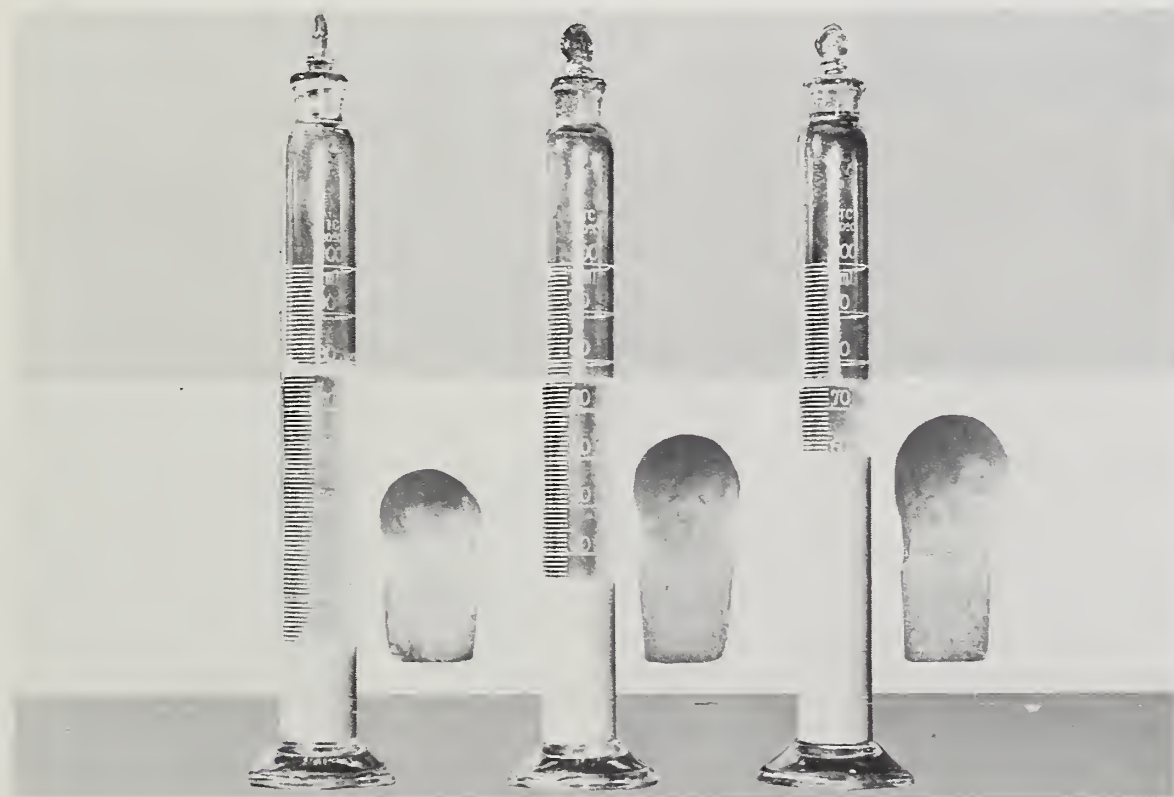
Office of Information

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### MAKING THE SEDIMENTATION TEST FOR BREAD-BAKING QUALITY OF WHEAT

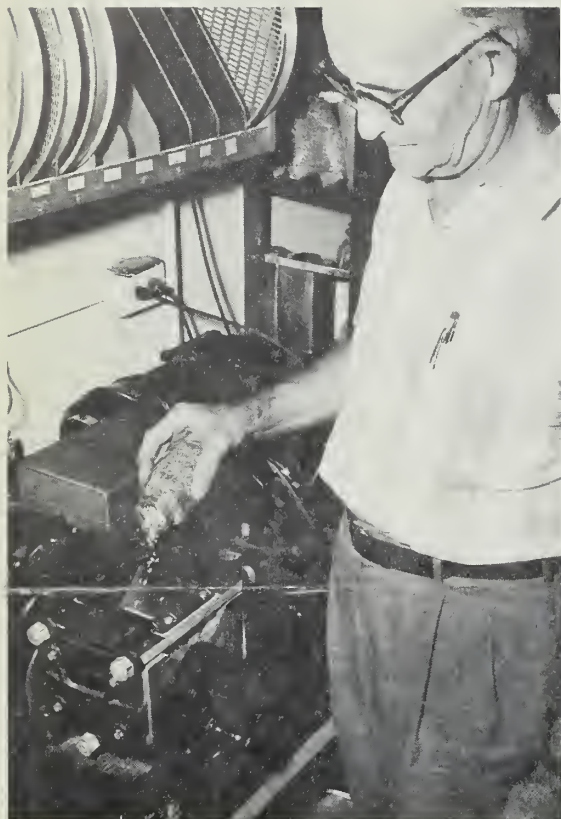
The sedimentation test is one of a number of tests that are used to determine the bread-baking quality of wheat. It can be run easily and quickly. Strong wheats--those with good bread-baking qualities--have gluten of a quantity and quality that will swell enormously when mixed with lactic acid. Weak wheats have gluten of an amount and kind that does not swell so much. The sedimentation test measures the amount of swollen gluten under controlled conditions, hence, provides a rough but simple index of the "strength" of the wheat.



BN-14572--The cylinder on the right shows the test of a "strong" wheat--60 on the scale--and the large loaf beside it made from "strong" wheat flour. The other cylinders show tests from weaker wheats and the smaller loaves made from them.

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N-42368--Morris H. Neustadt runs the wheat through the mill five times. About 200 grams (1½ lbs) is ground in a motor-driven corrugated steel roll mill.

N-42369--A sample of wheat is run through a Weston moisture meter to determine the amount of moisture in the wheat. The test is based on wheat with 14 percent moisture.



N-42367--The ground wheat is placed in a U. S. No. 100 woven wire cloth sieve and sifted on a shaker.



N-42366--Morris H. Neustadt holds the sieved material: in his left hand the bran and other coarse material, in his right hand the pan with usable flour.

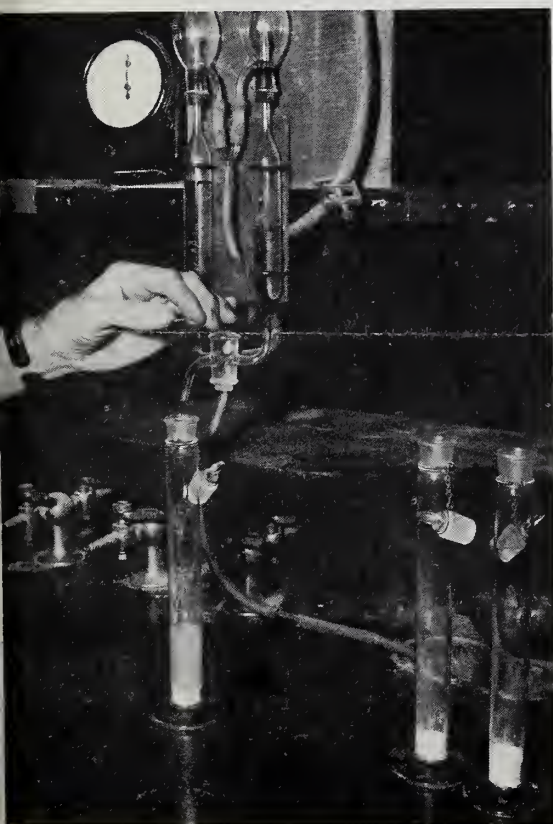




N-42358--Alvin J. Pinckney weighs out 3.2 grams of the sieved flour for the test.



N-42364--Alvin J. Pinckney transfers the 3.2-gram sample of flour to the 100 ml. glass-stoppered graduated cylinder.

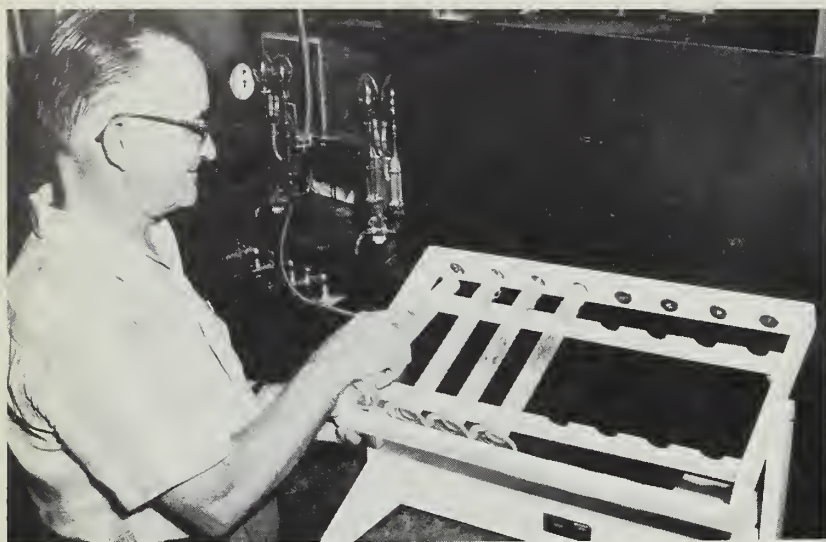


N-42365--Adding 50 ml. of water from an automatic pipette.



N-42363--Mix the flour and water thoroughly by moving the glass stoppered cylinder horizontally.





N-42359--Place the cylinder with the flour-water suspension on a shaking rack and shake for 5 minutes.



N-42360--After the cylinder is removed from the shaker 25 ml. of a reagent containing .5 normal lactic acid and 20 percent isopropyl alcohol are added to it and it is returned to the shaker for 5 minutes.



N-42362--The cylinder is then removed from the shaker and allowed to stand for 5 minutes. The reading is then recorded. Later it will be adjusted to a 14 percent moisture basis. That will be the sedimentation volume.